BUSINESS SYSTEMS
PAYROLL

TRS-80
MICRO COMPUTER SYSTEM

Catalog Number:
26-1501

CUSTOM MANUFACTURED IN U.S.A. BY RADIO SHACK A DIVISION OF TANDY CORPORATION

BUSINESS SYSTEMS – PAYROLL

Radio Shack Payroll is a complete computer and manual system designed to reduce the work load involved in writing paychecks and keeping account balances. It contains two program tapes and six data tapes. The programs are: PAYROLL CHECKS and PAYROLL UPDATE & QUARTERLY SUMMARY. The data tapes are blank originally but both of the programs will write information on them. Be sure to keep careful records of what is on each tape. Sound accounting procedures are even more important on a computer system than on a manual system.

As a second precaution, duplicate the programs two or three times. The procedure is described in the User's Manual. This will assure you of always having a program should a tape be accidentally destroyed or erased.

HOW TO SET UP YOUR SYSTEM

Write each employee's name and Social Security Number on the payroll worksheets. To begin processing your payroll on the TRS-80 you must have a tape with all employee payroll information. The PAYROLL UPDATE & QUARTERLY SUMMARY program will create this tape for you.

1. Load this program into the TRS-80 according to the instructions in the User's Manual.

2. Type RUN
   The program will ask you to type a **1** if you wish to create a data tape – a **2** if you want a quarterly summary – a **3** if you wish to add new employees to the data tape.

3. Reply by typing 1 then press **ENTER** (after every reply you must press **ENTER**) because option 1 will write out your first data tape.

4. Load data tape #1 into the tape recorder as described in the User's Manual and press **RECORD** and **PLAY** simultaneously. When this is done, press **ENTER**.

5. The computer will ask questions and provide instructions as follows:

   "HOW MANY EMPLOYEES?" Reply and press **ENTER**.
   "WHAT IS THE FICA %?" Reply with **5.85** or whatever the % is for the current year.
   "WHAT IS THE FICA SALARY LIMIT?" Reply with 16500 or whatever the limit is for the current year.
   "TYPE 1 IF YOU HAVE STATE INCOME TAX. TYPE 2 IF YOU DO NOT." If you reply with a 1, the program will ask if the State tax is straight percent. All but six states are straight percent of either gross or Federal. If you operate out of one of those six, you must calculate State tax yourself each time. If State tax is a straight percent, the computer will ask for that percent.

   Example: If the State tax is 2.94% of gross, reply with 2.94 (**not** .0294).
   It will then ask if that is percent of gross income or Federal tax; reply with the appropriate code.

   "TYPE 1 IF YOU HAVE CITY TAX, TYPE 2 IF YOU DO NOT." City tax is handled the same way as State tax. A category titled OTHER is available for any deductions not otherwise provided for, such as parking, non-resident taxes, etc.

   "HOW MANY PAY PERIODS PER YEAR?" If you pay weekly, reply **52**. If you pay bi-weekly, reply **26**. If you pay twice a month, reply **24**.

   "HOW MANY DOLLARS DEDUCTIBLE PER DEPENDENT?" Reply with the standard dollar amount allowed for dependents.

6. The Program will write this information onto the tape.

7. The next choice is whether or not you wish to enter quarter-to-date and year-to-date totals into each employee's record. If you choose not to, zeros will be automatically plugged into each field.

8. For each employee, the following instructions are given or questions asked:

   "ENTER FIRST 5 DIGITS OF SOCIAL SECURITY NUMBER. DO NOT INCLUDE DASHES."
   "ENTER LAST 4 DIGITS OF SOCIAL SECURITY NUMBER."
   "TYPE 1 FOR SINGLE, 2 FOR MARRIED."
   "NUMBER OF DEPENDENTS?"
   "1 FOR SALARIED, 2 FOR HOURLY." Reply in the same order as listed on the payroll worksheet. The employee information is then written to tape and you are ready to run your payroll on the TRS-80.

ON PAYDAY

1. Load the PAYROLL CHECKS program as described in the User's Manual.

2. Load the Data Tape you just created (or the one created last payday). Press **PLAY.**

3. Press **ENTER,** then the computer will ask:

   "BEGINNING QUARTER? 1 = YES, 2 = NO." If you reply **1**, the quarter-to-date totals will be set to zero.

4. The computer will begin reading the Data Tape and will print the first employee's information on the screen and say:

   "ENTER REG HOURS, OVTM HOURS." Be careful!! The computer is expecting two numbers separated by a comma. Reply with the number of hours to be paid at the straight time followed by a comma, followed by the number of hours to be paid at time and a half. If you make a mistake and only enter one number, just enter both numbers again.

   Example: If an employee has 40 hours straight time and no overtime, reply **40,0**

5. Tax will be calculated and printed on the screen under the same column headings used by the quarter-to-date and year-to-date totals.

6. The message:

   "ANY CHANGES? 1 = NO, 2 = GROSS, 3 = FED, 4 = FICA, 5 = STATE, 6 = CITY, 7 = OTHER" appears on the screen. Reply with a **2** to change gross, a **3** to change Federal tax, etc. If you wish to change FED, for example, you reply with a **3**; the message "NEW VALUE" appears on the screen. Type the new amount for Federal tax. The same pattern holds for any changes.

7. Once you are satisfied that all amounts are correct, reply with a **1** which means "no more changes". Net pay will be figured and QTD and YTD totals will be updated.

8. Now you should write the paycheck. The message:

   "HIT ENTER TO GO ON" will appear at the bottom of the screen. When the paycheck is written, press the **ENTER** button and the next employee's data will be read into the computer.

9. After all checks have been written, the message " # OF NEW EMP." will appear. Reply with the number of new employees added by the PAYROLL UPDATE & QUARTERLY SUMMARY program since the last pay period. If no new employees were added, type **0** (zero).

10. If one or more employees were added, the program will process the new employees.

11. The program will say:

    "NEW TAPE-RECORD-PRESS ENTER". The program is ready to write a new data tape which will be read into next week's PAYROLL CHECKS program. Simply load the new tape, press **RECORD** and **PLAY** on the tape recorder, then press **ENTER**. LABEL AND DATE THE TAPE!! BE SURE NOT TO WRITE ON THE LEADER!! Then write the generation number on the Data Tape Generation List.

12. The computer will create a new data tape and when finished, will say:

    "END OF JOB".

SPECIAL NOTES

1. When an employee's gross pay is 0, the program will ask:

   "TERMINATE – 1 = YES, 2 = NO". Reply with a **1** if you wish to terminate that employee, or a **2** if you wish to keep that employee on the payroll. Regardless, that employee's year-to-date totals will be passed from one data tape to the next.

2. The withholding tables in the program are stored in lines 2400, 2410, 2420, 2430, 2440, 2450, 2460 and 2470. When tax tables change, it will be necessary to modify these statements.

   To modify:

   a. List the program and look at the lines mentioned above.
   b. There are four numbers separated by commas for each tax bracket. Lines 2400 through 2430 are for single employees. Lines 2440 through 2470 are for married employees.
   c. Line 2400 contains three tax brackets, hence 12 numbers. The first number is the maximum for that bracket. The second number is the minimum amount of tax withheld for that bracket. The third number is the percent of the amount over the minimum to be withheld. The fourth number is the minimum salary for that tax bracket.

      EXAMPLE: You will receive notice of a change in withholding tax from the commercial payroll guide (this occurs about once a year).

      NOTE: Letters enclosed in parentheses in the tax table and DATA statement are Radio Shack's designators used to cross reference between the tax table and the DATA statement.

The table reads:

SINGLE

IF YOUR INCOME IS LESS THAN	TAX IS	*We will use a negative number here* ⟶
1700.00 (a)	0 (c)	+.00 (e) of the amount over −1 *(g)*
3800.00 (b)	0 (d)	+.16 (f) of the amount over 1700.00 *(h)*
4800.00	320.00	+.19 of the amount over 3800.00
over 4800.00	600.00	+.23 of the amount over 4800.00

The DATA statement would be:

```
                (a)   (c)  (e)  (g)     (b)   (d)   (f)     (h)
2400 D.       1700,    0,   0,  −1,    3800,    0,  .16,   1700,  4800,  320,  −19,  3800

2410 D. 999999,  600,  .23,  4800, etc.
```

NOTE: 999999 is our high limit for the highest tax bracket. Spaces in the DATA statement are used for clarity. DO NOT use spaces when entering above lines.

The SINGLE table must be entered first followed by the MARRIED table. If there are eight tax brackets, no further changes are needed. If there are (for example) only 7 brackets, line 270 must be changed.

```
270  IF  A (Z3) = 2. F.Y. = 1 to 7: READ M, T, U, V: N.Y.
```

(Note that number 7 is the only difference).

OTHER MODIFICATIONS

This program will handle 11 employees in a 4K RAM machine, 66 employees in 8K, or 177 in 16K. If you have a 4K machine and wish to increase its capability to 12 employees, you may do so by eliminating some of the messages the computer prints on the screen. These messages are only helpful when you are learning how to use the system. The modifications are:

```
10 CLS: P.: B = O

20 eliminate

250 IN. "REG, OVTM"; P, R: P = (P + R* 1.5) * A (Z + 6)

610 P. "1 = NO, 2 = GROSS, 3 = FED, 4 = FICA, 5 = STATE"

1012 P. AT 577, "TPP"
```

PAYROLL UPDATE AND QUARTERLY SUMMARY

In addition to creating the first data tape of the fiscal year (or the first one anytime), this program performs several other functions. It allows you to read in your most current data tape and receive an employee by employee summary of year-to-date earnings. This is useful when preparing W-2's. Or you can get company totals for the quarter and the year in all payroll categories. To receive these summaries, simply reply with a **2** when the computer gives you a choice of options. The program will instruct you as what to do next.

The final feature of this program allows you to easily add new employees to your data tape. It is best to do this immediately before you write paychecks because the PAYROLL CHECKS program will ask you how many new employees were added. It is critical that you respond correctly. If responses are in error you may have to re-create your entire data tape. To add new employees, choose option **3**. The program will instruct you to load your most current data tape (the one created by the last Payroll Check run).The program will read that tape and stop at the end. You must press **STOP** on the tape recorder and then press **PLAY** and **RECORD** simultaneously. The program will write the new employee information as it is called for — and the program will write it to tape.

When the program is completed you should run Payroll Checks immediately because this option (#3) can only be run once between each run of payroll checks.

Read this manual thoroughly and do some practice runs of the programs.Try to become familiar with each available option so you can use it correctly when you need it. If you work slowly and methodically with the TRS-80, you will quickly appreciate the power and accuracy engineered into this Radio Shack product.

CORRECTING THE DATA TAPE

Occasionally it may be necessary to correct some of the numbers on the data tape. Possible reasons include entry errors, program errors and changes in employee status (i.e., from single to married, or from 3 to 4 dependents, etc.). In these cases, a special program is necessary which reads in the data tape, allows you to correct it, then writes out a new tape.

The following program will change the values on the tape based on the position of the number.

PROGRAM TO CORRECT DATA TAPE

```
 10   CLS: P. "LOAD DATA TAPE TO BE CORRECTED"
 20   IN. "PRESS ENTER WHEN READY"; A$
 30   CLS: P. "HEADER RECORD"
 40   IN. #A (1), A(2), A(3), A(4), A(5), A(6), A(7), A(8)
 50   F. X = 1 TO 8: P. "POSITION"; X, A(X): N.X.
 60   IN. "ANY CHANGES – 1=YES, 2=NO"; Y
 70   IF Y=2 G.200
 80   IN' "ENTER POSITION TO BE CHANGED"; A
 90   IN. "ENTER NEW VALUE"; A(A): G.50
200   N=A(1): F.Z = 9 TO N*18 S.9
210   IN.#A(Z), A(Z+1), A(Z+2), A(Z+3), A(Z+4), A(Z+5), A(Z+6), A(Z+7), A(Z+8)
220   CLS: P. "RECORD NUMBER"; Z/9+1
230   F.X=1 TO 9: P. "POSITION"; X, A(Z+X-1): N.X
240   IN. "ANY CHANGES – 1=YES, 2=NO"; Y
250   IF Y=2 N.Z:G. 1000
260   IN. "ENTER POSITION TO BE CHANGED"; A
270   IN. "ENTER NEW VALUE"; A(Z+A-1): G.220
1000  P. "LOAD NEW TAPE – PRESS RECORD"
1010  IN. "PRESS ENTER WHEN READY"; A$
1020  A=A(1): B=A(2): C=A(3): D=A(4): E=A(5): F=A(6): G=A(7): H=A(8)
1030  P. #A; ",";B;",";C;",";D;",";E;",";F;",";G;",";H
1040  F.Z=9 TO N*18STEP9.
1050  A=A(Z): B=A(Z+1): C=A (Z+2): D=A(Z+3): E=A(Z+4): F=A(Z+5)
1060  G=A(Z+6): H=A(Z+7): I=A(Z+8)
1070  P.#A:",";B;",";C;",";D;",";E;",";F;",";G;",";H;",";I
1080  N.Z:P. "END OF JOB"
```

A note about line 210:

This line will take all of one line and about 4 or 5 spaces of the next line. You must enter this line without any spaces anywhere. When typing A(Z+8) you will overflow onto the next line; it's okay, just keep typing until the line is completed and then press **ENTER.**

EXAMPLE:

Suppose you wanted to change the number of dependents from 2 to 3 on a particular employee:

1. Run the program.
2. Reply **2 (NO)** to the question ANY CHANGES – 1 = YES, 2 = NO until you see that employee's Social Security Number is in positions 1 and 2. Refer to the PAYROLL SYSTEM FILE DOCUMENTATION sheet. Notice that the NUMBER OF DEPENDENTS is in position 4.
3. Reply **4** to ENTER POSITION TO BE CHANGED.
4. Reply **3** to ENTER NEW VALUE. This will change the number of dependents from 2 to 3.
5. Continue to reply **2 (NO)** to the question ANY CHANGES – 1 = YES, 2 = NO until the program says: LOAD NEW TAPE – PRESS RECORD – PRESS ENTER WHEN READY

The program is now ready to write a new data tape. Load a new tape; press **PLAY** and **RECORD** simultaneously, then press **ENTER.** The program will say END OF JOB when the new tape is ready. LABEL AND DATE THE NEW TAPE – Note the generation number on the DATA TAPE GENERATION LIST.

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NOTE: Good data processing procedure dictates that the user test the program, run and test sample sets of data, and run the system in parallel with the system previously in use for a period of time adequate to insure that results of operation of the computer or program are satisfactory.

Refer to User's Manual for warranties. Failure to adhere to procedures set forth in User's Manual may result in the loss of warranties.

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977-PERKCO-2980040

PRINTED IN U.S.A.

PAYROLL WORKSHEET

DATE _____

EMPLOYEE NUMBER	NAME	SOCIAL SECURITY NUMBER	HOURS WORKED—REGULAR (OVERTIME) WEEK							
			1	2	3	4	5	6	7	8
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PAYROLL WORKSHEET

DATE _____

EMPLOYEE NUMBER	NAME	SOCIAL SECURITY NUMBER	HOURS WORKED–REGULAR (OVERTIME) WEEK							
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PAYROLL WORKSHEET

DATE _____

EMPLOYEE NUMBER	NAME	SOCIAL SECURITY NUMBER	HOURS WORKED–REGULAR (OVERTIME) WEEK							
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PAYROLL WORKSHEET

DATE _____

EMPLOYEE NUMBER	NAME	SOCIAL SECURITY NUMBER	HOURS WORKED—REGULAR (OVERTIME) WEEK							
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PAYROLL WORKSHEET

DATE _____

EMPLOYEE NUMBER	NAME	SOCIAL SECURITY NUMBER	HOURS WORKED—REGULAR (OVERTIME) WEEK							
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DATA TAPE GENERATION LIST

GENERATION	CREATED BY	DATE
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PAYROLL SYSTEM
FILE DOCUMENTATION

Data Tape consists of one physical header record for each tape and two physical records for each employee. They are structurally as follows:

1 position = 4 bytes

HEADER RECORD

Position on Tape	Variable Within Program	Description
1	N	Number of employees
2	A	FICA annual salary limit
3	E	FICA rate: as % - i.e. 5.85% = 5.85
4	F	State rate: 0 = none; -1 = plug at check time, user will calculate — regular percentage such as 12.3 = per cent of gross — regular percentage + 1000 such as 1012.3 = per cent of Federal
5	G	City rate: 0 = none; -1 = plug at check time, user will calculate — regular percentage = per cent of gross
6	H	Other field indicator: if valid = 1, the field is used; if valid = 2, user must override in checks program.
7	I	Number of pay periods in a year
8	L	Dollars deductible per dependent

EMPLOYEE RECORDS

Record No. 1

Position on Tape	Position in Array	Description
1	1	First five digits of Social Security Number
2	2	Last 4 digits of Social Security Number
3	3	Marital Status: 1 = Single 2 = Married
4	4	Number of dependents
5	5	1 = salaried; 2 = hourly
6	6	If salaried = gross pay per period; if hourly = dollars per hour
7	7	Starts quarter-to-date totals gross pay
8	8	Federal withholding
9	9	FICA

Record No. 2

1	10	State tax
2	11	City tax
3	12	Other: can be used for tax or payroll deductions
4	13	Starts year-to-date totals gross pay
5	14	Federal
6	15	FICA
7	16	State
8	17	City
9	18	Other

```
10 REM ** ACCOUNTS RECEIVABLE SORT PROGRAM **
20 REM COPYRIGHT (C) 1979, TANDY CORP.
30 REM VERSION 1.0 - 07/16/79
40 CLEAR12000:DEFINTA-Z:DIMA$(500,1),B(500),P(500,2):OPEN"I",1,"TRANSFER":LINEIN
   PUT#1,PI$:LINEINPUT#1,PD$:LINEINPUT#1,PS$:LINEINPUT#1,PT$:LINEINPUT#1,PG$:C
   LOSE1
50 OPEN"I",1,PI$:OPEN"R",2,PD$:INPUT#1,TI,TN,F,U,UT,UN,EP,R0,R1,R2,R3,R4,R5,R6,R
   7,CV#:N=TN-1:FORX=1TON:INPUT#1,P(X,0),P(X,1),P(X,2):NEXT:CLOSE1:FORJ=1TON:G
   OSUB90:NEXT:CLOSE2
60 CLS:PRINT@472,"SORT IS IN PROGRESS":Z=0:GOSUB100:Z=1:Y=0:GOSUB220:Z=2:Y=1:GOS
   UB220
70 CLS:PRINT@466,"SORT COMPLETE. SAVING FILES":OPEN"O",1,PI$:PRINT#1,TI;TN;F;U;U
   T;UN;EP;R0;R1;R2;R3;R4;R5;R6;R7;STR$(CV#)+"D0":FORX=1TON:PRINT#1,P(X,0);P(X
   ,1);P(X,2):NEXT:CLOSE1:GOSUB340
80 CLS:PRINT@468,"RETURNING TO MAIN MENU":CLEAR50:RUN"ARS"
90 JR=INT((J-1)/2)+1:JD=J-2*INT((J-1)/2)-1:FIELD2,JD*127ASD$,11ASD0$,13ASD1$,32A
   SD2$,5ASD4$,56ASD5$,2ASDD$,8ASDE$:GET2,JR:A$(J,0)=D1$:A$(J,1)=D4$:B(J)=CVI(
   DD$):RETURN
100 M=N
110 M=INT(M/2)
120 IFM=0THENRETURN
130 K=N-M:J=1
140 I=J
150 L=I+M
160 IFB(ABS(P(I,Z)))>B(ABS(P(L,Z)))THEN190
170 J=J+1:IFJ>KTHEN110
180 GOTO140
190 T=P(I,Z):P(I,Z)=P(L,Z):P(L,Z)=T:I=I-M
200 IFI<1THEN170
210 GOTO150
220 M=N
230 M=INT(M/2)
240 IFM=0THENRETURN
250 K=N-M:J=1
260 I=J
270 L=I+M
280 IFA$(ABS(P(I,Z)),Y)>A$(ABS(P(L,Z)),Y)THEN310
290 J=J+1:IFJ>KTHEN230
300 GOTO260
310 T=P(I,Z):P(I,Z)=P(L,Z):P(L,Z)=T:I=I-M
320 IFI<1THEN290
330 GOTO270
340 CLS:PRINT"CHECKING FOR DUPLICATE ACCOUNTS
    ":XF=0:FORX=2TOTN-1:IFB(ABS(P(X,0)))<>B(ABS(P(X-1,0)))THEN350ELSEIFSGN(P(X,
    0))=-1ORSGN(P(X-1,0))=-1THEN350ELSEPRINT"ACCOUNT #";B(P(X,0));"IS A DUPLICA
    TE":XF=1
350 NEXT:IFXF=0THENPRINT"NO DUPLICATES"
360 PRINT:PRINT"PRESS <ENTER> TO CONTINUE""
370 EN$=INKEY$:IFEN$<>CHR$(13)THEN370ELSERETURN
```

```
10 REM ** ARS TRANSACTION ENTRY PROGRAM **
20 REM COPYRIGHT (C) 1979, TANDY CORP.
30 REM VERSION 1.0 - 07/16/79
40 CLEAR500:DEFINTA-Z:DIMP(500,2),W,WS,WD,WL,W$,FL,CF,IN$:W$="":N#=0:W#=0:V$="":
     X=0:D1#=16777216:D2#=65536:D3#=256
50 ONERRORGOTO1280:OPEN"I",1,"TRANSFER"
60 LINEINPUT#1,PI$:LINEINPUT#1,PD$
70 LINEINPUT#1,PS$:LINEINPUT#1,PT$:LINEINPUT#1,PG$
80 CLOSE1
90 L2$="#######.##"
100 LF$=" ":LL$=STRING$(80,"-")
110 GOSUB1180:GOTO430
120 CLOSE:CLS:PRINT@469,"RETURNING TO MAIN MENU":GOSUB1250:CLEAR50:RUN"ARS":END
130 WD=FRE(""):IN$="":CF=0:W$=INKEY$:WD=0:WS=WD:WL=WD:IFFL=WDTHENFL=1
140 PRINTSTRING$(ABS(FL),CHR$(136));STRING$(ABS(FL),CHR$(24));
150 PRINTCHR$(14);:FORW=1TO25:W$=INKEY$:IFW$<>""THEN160ELSENEXT:PRINTCHR$(15);:F
     ORW=1TO25:W$=INKEY$:IFW$<>""THEN160ELSENEXT:GOTO150
160 IFW$<>CHR$(13)THEN180ELSEPRINTSTRING$(ABS(FL)-WL," ");
170 PRINTCHR$(15);:W=25:NEXT:RETURN
180 IFW$<>"@"THEN200
190 CF=1:PRINTCHR$(15);:RETURN
200 PRINTCHR$(14);:IFW$=CHR$(24)THENPRINTSTRING$(WL,CHR$(24));:GOTO130
210 IFW$<>CHR$(8)THEN250ELSEIFWL=0THEN150ELSEPRINTCHR$(24);:IFFL>0THEN230ELSEIFP
     EEK(16418)=44THEN240
220 IFPEEK(16418)=46THENWD=0:GOTO230ELSEIFPEEK(16418)=43ORPEEK(16418)=45THENWS=0
230 IN$=LEFT$(IN$,LEN(IN$)-1)
240 WL=WL-1:POKE16418,136:GOTO150
250 IFABS(FL)=WLTHEN150ELSEIFFL>0THENIFW$>=" "ANDW$<="z"THEN300
260 IFW$="."ANDWD=0THENWD=1:GOTO300
270 IFW$=","THENPRINTW$;:WL=WL+1:GOTO310
280 IF(W$="-"ORW$="+")ANDWS=0ANDWL=0THENWS=1:GOTO300
290 IFW$<"0"ORW$>"9"THEN150
300 PRINTW$;:IN$=IN$+W$:WL=WL+1
310 IFABS(FL)=1THEN170ELSE150
320 PRINT@128,"(TYPE @ TO EXIT TO MAIN MENU)";:RETURN
330 PRINT@128,CHR$(30);CHR$(29);"(TYPE @ TO REDO ENTRY)";:RETURN
340 IFCF<>0THENRETURN
350 IFLEN(IN$)>=3THENIFMID$(IN$,LEN(IN$)-2,1)="."THENRETURN
360 IN$="     INVALID FORMAT !":GOSUB420:RETURN
370 IFIN$=""THENDX!=0:RETURN
380 IFLEN(IN$)<>8ORMID$(IN$,3,1)<>"/"ORMID$(IN$,6,1)<>"/"THENIN$="     INVALID FO
     RMAT !":GOSUB420:RETURN
390 DX$=MID$(IN$,7,2)+MID$(IN$,1,2)+MID$(IN$,4,2)
400 FORW=1TO6:IFMID$(DX$,W,1)<"0"ORMID$(DX$,W,1)>"9"THENW=6:NEXT:IN$="     INVALI
     D FORMAT !":GOSUB420:RETURNELSENEXT
410 DX!=VAL(DX$):RETURN
420 FORW9=1TO4:PRINT@960,CHR$(30);:FORW=1TO15:PRINT@975,IN$;:NEXTW:FORW=1TO15:PR
     INT@975,CHR$(30);:NEXTW:NEXTW9:CF=2:GOSUB1040:RETURN
430 GOSUB440:GOSUB1040:GOTO450
440 CLS:PRINTTAB(20)"ENTER TRANSACTIONS":RETURN
```

ADDENDUM

for BUSINESS SYSTEMS—PAYROLL
Catalog Number 26-1501

In the last sentence on page 2, the word "standard" should be "annual", as follows:

"HOW MANY DOLLARS DEDUCTIBLE PER DEPENDENT?" Reply with the **annual** dollar amount allowed for dependents.

hints & tips on trs-80 cassette programs

The cassette tape system of the Radio Shack TRS-80 is a fast, accurate method of saving both data and programs. This ability allows you to store information for future use with the assurance that each time the program or data is used, it is the same.

There are many factors which will affect the performance of a cassette system. The most significant one is **volume.** Too low a volume may cause some of the information to be missed. Too high a volume may cause distortion and result in the transfer of background noise as valid information. Both of these situations will cause errors when loading from a tape. However, with a little care and some precautions, you should enjoy trouble-free use of your cassette system.

The cassette deck supplied with the TRS-80 is very compatible with the system and will perform its duties with great success. To keep the cassette deck in top condition and thus minimize your problems, you should periodically perform some routine maintenance on it. Dirty heads can cause as much as a 50% loss in volume. Also, heads become magnetized with use and may cause distortion. We recommend that you clean the head capstan and pinch rollers after every 4 hours of operation. Heads on new recorders should always be cleaned before use. If you use a different recorder, you should remove the AUXiliary (grey) plug when loading and remove the EARphone (black) plug when saving on tape. This will minimize extra noise.

NOTE: Cassette cleaning and demagnetizing accessories are available from your local Radio Shack store.

The volume ranges for Level I and Level II basic are different. This is because the rate at which information is transferred is faster in Level II (250 BAUD for Level I, 500 BAUD for Level II). The recommended volume settings for loading from cassette tape are:

	USER GENERATED	PRE-RECORDED RADIO SHACK
LEVEL I	7-8	7 1/2 - 8 1/2
LEVEL II	5-6	5 1/2 - 6 1/2

Note that software programs purchased from Radio Shack should be loaded at slightly higher volumes. This is because these tapes are produced under high speed conditions using commercial audio equipment and the recorded volumes are slightly lower than tapes you produce.

When information is being loaded from the cassette tape, two asterisks will appear on the screen. The one on the right will flash, (on or off) each time a new line of data or program is read in. If the asterisks do not appear, or the one on the right does not flash, then the information is not loading properly. This is almost always due to an improper volume setting. If the asterisks do not appear, try lowering the volume. It is also a good idea to unplug the EARphone (black) plug and listen for the start of the program. This will tell you exactly where the program starts. If the asterisks appear, but one is not flashing, try increasing the volume setting. If higher volume setting doesn't solve the problem, clean the head. Use the reset button to stop the cassette and return control to you if loading problems occur.

Radio Shack programs are recorded at least twice on the same tape (usually on the reverse side). You should do the same when you record programs on tape. This will give you a back-up if one does not load properly or if it becomes damaged.

ERRORS

LEVEL I — In rare cases, you might get an error message when a program is loaded from tape. This means that either some information was not transferred or that noise was read in as data. In either case, adjust the volume accordingly and this will usually correct the problem.

LEVEL II — There is a very rare case in which only a minor error may occur in loading a program and no error message will be printed. The best way to check for this, is to List the program. If the program looks OK, use the CLOAD? command to compare the tape version with the one you loaded. If they are not exactly the same, a "BAD" message will be printed. Such a case normally can be remedied with a minor adjustment in the volume setting (usually a slight increase).

Radio Shack Programs are recorded on a very high quality tape. It would be to your advantage to record your programs on very good tapes. The time you spend on your programs will make it well worth the additional expense. If you have tried all the suggestions we have given you, then the problem might be the tape itself.

Computer date and programs stored on cassette tape are high fidelity recordings and should be treated with care. They should be stored in a relatively dust-free area (a cassette case is recommended) and protected from high temperatures. Magnetic and electrical fields may alter recorded information, so avoid them (i.e. household appliances, power sources such as transformers and television sets, etc.)